

Conference Paper

Leprosy Cases in South Konawe Regency Based on Surveillance Data of the South Konawe Regency Health Office, Southeast Sulawesi Province, Indonesia

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Abstract.

Leprosy is a chronic infectious disease caused by the bacterium *Microbacterium leprae*. Leprosy has become a public health problem in the South Konawe Regency. However, it does not affect death rates directly. It has caused disability, decreased productivity and stigma to the patients. Indonesia is the number 3 country in the world with leprosy cases. This article used data from the Indonesian Health Ministry and the annual report of the Leprosy program by the South Konawe Regency Health Office from 2017 to 2021. The conclusion was that leprosy cases in the South Konawe Regency have reached the elimination stage with prevalence less than 1/10,000 of the population. The majority of leprosy patients were men of productive age (20 years to 60 years).

Keywords: Leprosy, South Konawe Regency, Southeast Sulawesi, Indonesia

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1. INTRODUCTION

Leprosy sometimes called as Hansen's Morbus is a chronic infectious disease caused by *Mycobacterium Leprae*. It usually attacks skin tissue, peripheral nerves, limbs, mucosa and also the respiratory tract [1]. There is sign leprosy such as feeling of weakness or numbness on the skin which has a rash or lesion. The leprosy bacteria can spread through droplets.

Leprosy can be transmitted by direct interaction and tight contact with leprosy patients and breathing. The average incubation period of leprosy is 2 to 5 years. Sometimes there are also those who have an incubation period of more than 5 years [2]. Patients who have not been treated regularly are potentially transmitted leprosy to others. Tropical countries are the largest contributors to leprosy in the world. It has been found the number of new cases in a year in India and Brazil as the first and second position and Indonesia in the third position [3].

In Indonesia, the number of new cases found around 6.07 per 100.000 population in year 2019. The total number of new cases is 15.910. In 2000, Indonesia had achieved

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the elimination of leprosy (the number of registered cases of leprosy or the prevalence rate of $<1/10.000$ population). However, there are 10 provinces that have not achieved the elimination of leprosy. Furthermore, at the Regency/City level, at the end of 2017 there were 142 Regencies/Cities that had not yet achieved the elimination of leprosy spread over 22 Provinces [3].

There is something we need to know to be aware that is Indonesia is the 3rd highest leprosy cases in the world. The abnormalities in leprosy are similar to other diseases such as tinea versicolor, ringworm, and urticarial. Effective treatment for those affected by leprosy is giving multi drug treatment (MDT) which is available free of charge at the Public Health Center and several hospitals. The length of treatment was 6 months for the PB type (pausibacillary), and 12 months for the MB type (multibacillary). The purpose of treatment is to break the chain of transmission, prevent disability or treat disability so that it does not continue. In addition, it is need to improve the treat complications and the quality of patient life. Leprosy is not same as disability, leprosy can be treated, find early signs and symptoms of leprosy, eliminate stigma and discrimination.

2. METHODOLOGY

South Konawe Regency is located in the Southeastern Peninsula of Sulawesi Island. It is located in the southern part of the equator running from North to South between $3^{\circ}.58.56'$ and $4^{\circ}.31.52'$ South Latitude and longitude from West to East between $121.58'$ and $123.16'$ East Longitude [4].

This study is using various sources from the Indonesian Government Agencies. Information on leprosy cases was obtained from the South Konawe Regency Health Office from 2017 to 2020. Additional data obtained from annual leprosy program report since 2014 to second quarter of year 2021. The results of the study are presented on the images as follow.

3. RESULT

The number of leprosy new cases in South Konawe Regency tends to fluctuate. It was decreased in year 2018 but increase in year 2020. It also happened on national scale which increase from 2018 ($6.42/100,000$ population) to 2019 ($6.51/100,000$ inhabitants) [1].

Based on the graph above, it can be seen that in the year 2021 people with leprosy in *South Konawe Regency* from year to year are mostly men (60%). Several studies show

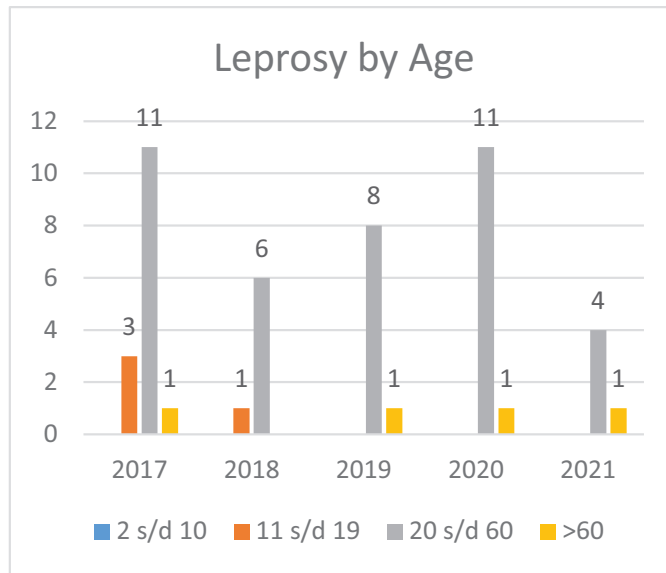


Figure 1: The new cases every year Sources: *Leprosy program data of South Konawe Regency Health Office*

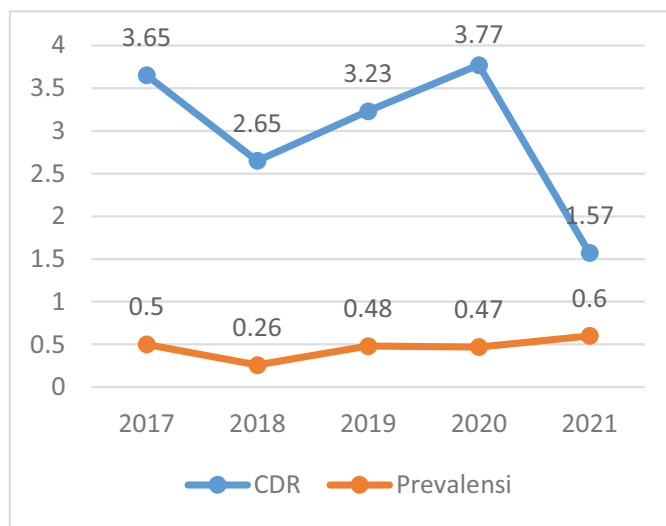


Figure 2: Leprosy by gender Sources: *Leprosy program data of South Konawe Regency Health Office.*

that gender is a risk factor for leprosy which men tend to be more at risk to get leprosy [5], [6].

The graph showed that leprosy spread out mostly happen on the 20 to 60 years old. It is must be raise consent since that age is productive age. Many leprosy patients are family backbone. The leprosy bring family problems such as psychosocial as the impact of bad image [7],[8].

One area can be declared to be eliminated if the prevalence rate of leprosy in each area is less than 1 per 10,000 populations and the case target of detection rate (CDR) is less than 5 per 100,000 population [1]. The graph above showed that South Konawe

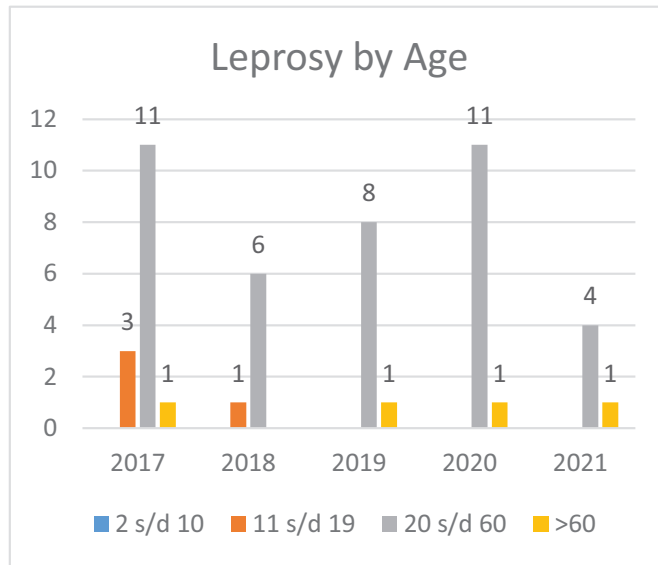


Figure 3: Leprosy by age Sources: Leprosy program data of South Konawe Regency Health Office.

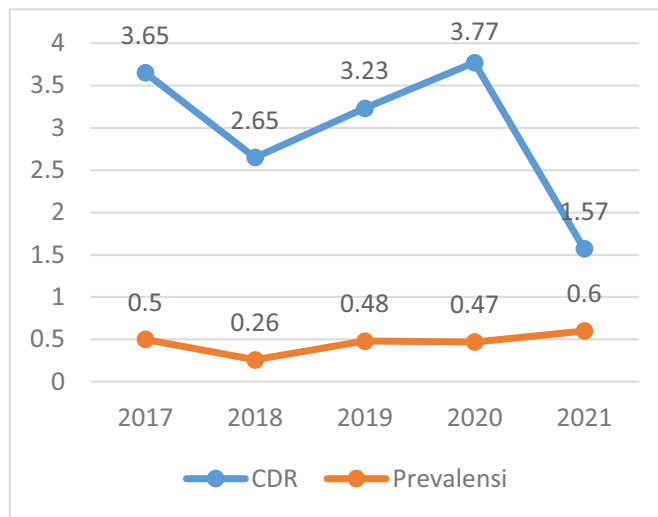


Figure 4: CDR and prevalensi every year Sources: Leprosy program data of South Konawe Regency Health Office.

Regency has been included in the category of leprosy elimination area from 2017 to 2021.

4. DISCUSSION

Leprosy is often considered as cursed disease by Indonesian society. Many people with leprosy feel ashamed with their disease, doubt to leave the house to seek treatment, poor knowledge, history of long contact with leprosy patient, adherence to medication, negative stigma from the community and difficulty to access the health services [2].

The leprosy disease in second quarter of 2021 in South Konawe Regency mostly happens in productive age with high to the men (60%). Male genital has a higher risk factor compared to women [5]. The leprosy is mostly found in men with an average of productive age [9]. This could have happened because in South Konawe Regency, men have the role of earning living outside the home. A spatial study showed that there is a link between leprosy and areas that have enough water such as ponds, coasts, rice fields, rivers and lakes or reservoirs [9], [10].

5. CONCLUSION

Most leprosy cases in South Konawe Regency happen to men on average age between 20 to 60 years which is productive age for Indonesians. Leprosy cases in South Konawe Regency are under the prevalence rate, which is less than 1/10,000 population. By this it can be said that South Konawe Regency has eliminated leprosy. However, it is possible the leprosy cases can be improve if the causes factor are not solve by considering Indonesia as the third country in the world with the highest leprosy cases. One of the main program of the South Konawe Regency is tracking leprosy cases to prevent permanent physical disability.

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